

REMARKS

Applicant has carefully reviewed and considered the Final Office Action mailed on February 5, 2007, and the references cited therewith.

Claim 21 and 51 are amended to clarify antecedent basis and grammar, respectively. No new matter is added. Claims 3-10, 12-21, 22-25, 27-30, *31-36*, 37-40, *41*, 42-43, *44*, 45-46, *47*, 48, 49, 50, and 51 are pending. Of these, the Examiner has withdrawn the italicized claims 22-25, *31-36*, *41*, *44*, and *47*. Please charge any required fee or credit overpayment to Deposit Account 502931.

Arguments

Withdrawal of Claims as drawn to non-elected species

In the Restriction Requirement mailed September 4, 2002, the Examiner requested election of one of the following species:

- I. Figs. 19A and 19B;
- II. Figs. 19C-19L.

Applicant elected species I, and added claim 40, which reads on both species, as a generic and linking claim. Applicant filed a paper January 27, 2003, identifying claims 3-21, 27-30, 37-40, and 42 as reading on the elected species. Applicant does not traverse the restriction asserting the species are different inventions if no generic linking claim is allowed. However, Applicant has previously explained that claim 40 is generic and linking, and therefore traversed the restriction regarding all claims that depend on claim 40 if claim 40 were determined to be allowable.

Claims 22-25, 31-36, 41, 44, and 47 were withdrawn by the Examiner as being drawn to a non-elected species. Applicant respectfully traverses the withdrawal of claims (but not the restriction as to species).

Claim 41, withdrawn by the Examiner, is dependent upon claim 40, which is neither withdrawn nor restricted. Generic claim 40 reads on the withdrawn independent claims 22 and its dependent claims 23-25 and 31, and independent claim 32 and its dependent claims 33-36.

Applicant traversed the non-allowance of claim 40. Accordingly, under MPEP 818.03(d), once claim 40 is held allowable, these claims should not be withdrawn, and reconsideration and allowance of the claims is respectfully requested.

Claims 44 and 47, withdrawn by the Examiner, are dependent upon claims 43 and 46, respectively, which are not withdrawn or restricted.

Further, generic claims 43 and 46 read on the withdrawn independent claims 22 and its dependent claims 23-25 and 31, and independent claim 32 and its dependent claims 33-36. Applicant traversed the non-allowance of claim 43. Accordingly, under MPEP 818.03(d), once claim 43 is held allowable, these claims should not be withdrawn, and reconsideration and allowance of the claims is respectfully requested.

Drawing objection

The Examiner objected to the drawings as not showing every feature of the claims; specifically the tray height, the length side, and the width side. Applicant respectfully traverses, since anyone of skill in the art upon reading the claim as a whole including the recitation “a height, a length side and a width side, wherein the **length side is longer than the width side** and **the height is shorter than the width side;**” (emphasis added) would recognize that all of the terms of the objection are SHOWN in the figures, for example, FIG. 16. Solely to move prosecution ahead and in the spirit of cooperation, Applicant is including a red-line markup of Figure 16 showing a height, a length side and a width side, wherein the **length side is longer than the width side** and **the height is shorter than the width side**. The amendments to the drawings are shown in red-line markings on the application’s Figure 16 attached hereto (marked “Annotated Sheet” at its top). The Figure 16 attached hereto that is marked “Replacement Sheet” at its top represent the drawing with the changes implemented.

The amendments to Figure 16 comply with the Examiner’s apparent requirement in the February 5, 2007 Final Office Action, that the height, width, and length dimensions of trays be explicitly indicated and labeled. The amendments to Figure 16 that Applicants have made in response to the Final Office Action, are supported by the standard definitions of the terms *height*, *width*, and *length* in the English language. Reconsideration and withdrawal of the objection is respectfully requested.

Rejection under 35 U.S.C. § 112 Paragraph 2

1) The Applicable Law for Rejections under 35 U.S.C. § 112 Paragraph 2

The law and the corresponding sections of the MPEP were recited in the prior Amendment and Response and can be found there.

2) Arguments relative to the 35 U.S.C. § 112 Rejection of Claims 21, 49 and 51

In the Final Office Action mailed February 5, 2007, the Examiner rejected claims 21, 49 and 51 as being indefinite. Applicant respectfully traverses, since each claim would clearly apprise one of an ordinary level of skill in the pertinent art at the time the invention was made, of the scope of the claim, in view of the content of the particular application disclosure, and the teachings of the prior art. Applicant has, however, amended claim 21 and 51 to clarify antecedent basis and grammar, respectively. Applicant respectfully asserts that the rejection of claim 49 is a mistake, since “long-dimension side” is used in both claim 49 and its independent claim 3, and no mention is made of “length side” in either. Accordingly, it is respectfully requested that the rejection be reconsidered and withdrawn and the claims allowed.

Rejection Under 35 U.S.C. § 103(a)

1) The Applicable Law for Rejections under 35 U.S.C. § 103

The law and the corresponding sections (M.P.E.P. § 2141.03) of the MPEP were recited in the prior Amendment and Response and can be found there.

2) Arguments relative to the 35 U.S.C. § 103 Rejection of Claims

Claims 3-9, 12-21, 27-30, 40, 42, 43, 45, 46, and 48-51

Claims 3-9, 12-21, 27-30, 40, 42, 43, 45, 46, and 48-51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's admitted prior art [discussed on pages 2-5 of the specification] in view of *Jackson et al.* (US 6,139,243) *Kawasaki* (US 4,468,165) and *Hinchcliffe et al.* (US 4,303,366). Applicant respectfully traverses. To show obviousness under § 103, the burden is on the Examiner to show that, considering the claimed invention as a whole and

considering the references a whole, **that the references suggest the desirability** and thus the obviousness of making the combination; further, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. *Hodosh, supra*. Neither *Jackson et al.* nor Applicant's discussion of the prior art provide any previous recognition of a need for, or the desirability of, moving trays parallel to their short dimension rather than parallel to the long dimension of the tray. The Examiner has repeatedly asserted that it is not clear to him how moving the trays in their short dimension reduces a distance of travel or provides a speed benefit. Accordingly, the Examiner's own assertions that the Examiner is unclear of how the claimed invention provides a benefit or shortens tray-travel distances in the §112 rejection directly contradicts his assertion of the obviousness of the claims in the §103 rejection.

The Final Office Action repeated arguments of the Office Action Mailed August 2006, where the Examiner first added *Hinchcliffe et al.* and *Kawasaki* to the previously cited *Jackson et al.* patent. *Hinchcliffe et al.* describe and show cigarette trays with considerable height and apparently many cigarettes stacked on one another. There is no description or suggestion of an inspection station to inspect the cigarettes. While the figures in *Hinchcliffe et al.*'s patent apparently show a tray width about equal to the length of a cigarette (or a filter for a cigarette) and a longer length, there is no mention of the relative length and width of the trays, nor of why the trays are oriented as shown, nor any discussion of possible desirability of move the trays through an inspection station in the direction recited in the present claims. In fact, *Hinchcliffe et al.*'s trays (with huge numbers of stacked cigarettes or cigarette filters) are unusable in the present claimed inspection environment since the cigarettes in the middle cannot be inspected. Moreover, *Hinchcliffe et al.* describe a tray rotation that rotates the tray full of stacked cigarettes around a line parallel to its width, empties the tray into a different type of conveying system and then, after re-rotating the tray back to its upright orientation, moves the empty tray down and backward (Figs 2 and 4) or at an angle to the incoming trays (Fig 6). The tray rotation operation that occurs in *Hinchcliffe et al.* alters the direction of the trays as they move through the system.

Kawasaki, on the other hand, stacks postal matter (envelopes or other mail items) in trays after inspection at a "reading station" and sorting. There is no tray rotation or flipping in *Kawasaki*. *Kawasaki* describes trays used to sort and transfer stacked postal matter. As with

Hinchcliffe et al., *Kawasaki* makes no mention of the relative length and width dimensions of the trays, and there is no discussion of the desirability of moving the trays in the direction recited in the present claims. Also akin to *Hinchcliffe et al.*, the trays in *Kawasaki* have considerable height, and therefore *Kawasaki* cannot achieve the rotation recited in certain of the present claims without altering the advantageous spacing in the present claims. Furthermore, *Kawasaki* shares *Hinchcliffe et al.*'s problem that the stacked objects in the middle of the tray (in *Kawasaki's* case, postal matter) cannot be inspected, and thus the *Kawasaki* system could not work with the presently amended claims.

There is no description or suggestion in *Hinchcliffe et al.* or *Kawasaki* of a smaller footprint or other benefit that would motivate one of skill in the art to combine the non-inspection tray movement of those references with the tray-flipping inspection system of *Jackson et al.* Further, both *Hinchcliffe et al.* and *Kawasaki* stack the items in their trays, making it impossible to inspect all the items in the trays. In summary, there is nothing in the cited prior art that would motivate one of skill in the art at the time of the invention to combine *Hinchcliffe et al.*'s cigarette-tray-emptying system or *Kawasaki's* sorting and conveying system into that of *Jackson et al.*, as proposed by the Examiner. The Examiner asserts that moving trays along a direction perpendicular to the long side is well known as evidenced by *Hinchcliffe et al.* or *Kawasaki*. However, Applicant respectfully submits that there is no motivation in the prior art for the proposed combination since the trays of *Hinchcliffe et al.* (carrying cigarettes from one station to another and dumping them into a different conveyor) or *Kawasaki* (carrying stacked mail without jumbling the stack) serve a different purpose than *Jackson et al.* (separating a single layer of devices for inspection). Further, *Kawasaki* reads data (inspects) from the postal matter before stacking the pieces into trays and has no description or suggestion of looking at the back side of the objects, and there is no description or suggestion in *Hinchcliffe et al.* of inspecting the cigarettes, which are randomly jumbled in piles in their trays.

According to MPEP 2141, "the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination." Applicant respectfully submits that the Examiner has failed to provide a motivation for combining these references, or if there is a motivation that it is impermissibly from the present application.

In contrast to the cited references, one benefit to the current claims is that the recited

direction allows a tray-to-tray spacing that allows for a smaller overall footprint in an inspection environment. The Examiner cites this benefit as motivation to combine. However, this benefit is provided by the present disclosure and is not in the reference. There is nothing in the cited prior art that would motivate one of skill in the art at the time of the invention to combine *Hinchcliffe et al.*'s cigarette trays and their conveying system or the trays of stacked postal material of *Kawasaki* into that of *Jackson et al.*, as proposed by the Examiner. Applicant respectfully asserts that the tall trays of *Hinchcliffe et al.* and of *Kawasaki* would not work in the machine-vision inspection system invention of the present claims of our application nor in the system described by *Jackson et al.* Applicant respectfully submits that the Examiner has failed to provide a motivation for combining these references, or if there is a motivation that it is impermissibly from the present application.

Claim 3 and its dependent claims

Applicant respectfully directs attention to the arguments presented in the Amendment and Response filed November 27, 2006 for this specific argument. Accordingly, claims 3, 12, 17, 20 and 40 and their dependent claims appear in condition for allowance and reversal of the rejection is respectfully requested.

Claim 9

Claim 9 was rejected under 35 U.S.C. § 103(a). Applicant respectfully traverses. The Examiner asserted that it was deemed inherent that specific structures of the present invention for claim 9 are inherent in the cited prior art, but provides no evidence of this. The Examiner has failed to show any structure equivalent to the description in the present application for a **means for moving the second inspection station with respect to the inverting mechanism**. Reversal of the rejection is respectfully requested.

Claim 13

Claim 13 was rejected under 35 U.S.C. § 103(a). Applicant respectfully traverses. The Examiner has failed to show a first tray-transfer device for holding at least the first tray, said first tray-transfer device moving the first tray from the first inspection station to the flip station; and a

second tray-transfer device for holding at least the second tray, said second tray-transfer device moving the second tray from the flip station to the second inspection station. *Jackson et al.* show a single continuous conveyer 54. Reversal of the rejection is respectfully requested.

Claim 14

Claim 14 was rejected under 35 U.S.C. § 103(a). Applicant respectfully traverses. The Examiner asserted that it was deemed inherent that specific structures of the present invention for claim 14 are inherent in the cited prior art, but provides no evidence of this. The Examiner has failed to show a mechanism for flipping the devices carried in a tray, the mechanism further comprising **means for limiting the motion of the rotator**. Reversal of the rejection is respectfully requested.

Claim 17

Claim 17 was rejected under 35 U.S.C. § 103(a). Applicant respectfully traverses. The Examiner has failed to refute any aspect of Applicant's argument for this claim. Reversal of the rejection is respectfully requested.

Claim 20

Applicant respectfully directs attention to the arguments presented in the Amendment and Response filed November 27, 2006 for this specific argument. Reversal of the rejection is respectfully requested

Claims 10, 37-39

Claims 10 and 37-39 were rejected under 35 U.S.C. § 103(a) over Applicant's admitted prior art, in view of *Jackson et al.* (US 6,139,243) *Kawasaki* (US 4,468,165), *Hinchcliffe et al.* (US 4,303,366) and *Bilodeau* (US 5691810). Applicant respectfully traverses. Applicant respectfully directs attention to the arguments presented in the Amendment and Response filed November 27, 2006 for this specific argument. Accordingly, claims 37-39 and 10 appear in condition for allowance and reversal of the rejection is respectfully requested.

Claims 40, 41-42

Regarding claim 40 and its dependent claims 41-42, the cited references do not show a tray-transfer device combined with the other elements that moves the devices from the first inspection station to the second inspection station in a direction substantially perpendicular to the long-dimension side of the tray. Accordingly, claims 40 and its dependent claims 41-42 appear in condition for allowance and reversal of the rejection is respectfully requested.

Further, claim 40 provides a generic linking claim between independent claims 3, 12, 17, 20, 37 and independent claims 22 and 32, and dependent claim 41. Thus, claim 3 (and its dependent claims 4, 5, 6, 7, 8, 9, 10, and 27), 12 (and its dependent claims 13, 14, 15, 16 and 28), 17 (and its dependent claims 18, 19 and 29), and 20 (and its dependent claims 21 and 30); and independent claims 22 (and its dependent claims 23, 24, 25 and 31) and 32 (and its dependent claims 33, 34, 36) are linked by a generic claim 40.

Claims 43, 44-45, 46, 47-48

Regarding claim 43 and its dependent claims 44-45 and claim 46 and its dependent claims 47-48, the cited references do not show the equivalent structure for the means for inverting as recited (and combined with the other elements) and for moving the devices from the first inspection station to the second inspection station in a direction substantially perpendicular to the long-dimension side of the tray. Specifically, *Jackson et al.* show grasping the tray and lifting it off its conveying belt, then flip at a height, then lower back to the conveying belt. In contrast, the structures used in the present invention flip the tray for the means for flipping flip without raising and are not equivalent structures. Claim 43 is a means-plus-function claim that must be examined under 35 U.S.C. § 112 paragraph 6 to cover the corresponding structure, materials or acts described in the specification and equivalents thereof. The Examiner has failed to provide any showing of structure or acts equivalent to those described in the present specification to provide the recited means. Accordingly, Applicant respectfully requests that the rejection be reversed and that these claims be allowed.

Regarding claim 46 and its dependent claims 47-48, Applicant respectfully directs attention to the arguments presented in the Amendment and Response filed November 27, 2006 for this specific argument. Accordingly, Applicant respectfully requests that the rejection be

reversed and that these claims be allowed.

Further, claims 43 and 46 each provide a generic linking claim between independent claims 3, 12, 17, 20, 37 and independent claims 22 and 32, and dependent claims 41, 44, 45, 47, and 48. Thus, claim 3 (and its dependent claims 4, 5, 6, 7, 8, 9, 10, and 27), 12 (and its dependent claims 13, 14, 15, 16 and 28), 17 (and its dependent claims 18, 19 and 29), and 20 (and its dependent claims 21 and 30); and independent claims 22 (and its dependent claims 23, 24, 25 and 31) and 32 (and its dependent claims 33, 34, 36) and dependent claims 44, 45, 47, and 48 are linked by generic claims 43 and 46. Since the generic linking claims appear allowable as described above, reversal of the rejection and allowance of the claims are respectfully requested.

Claims 22, 44, 47 (all of which stand withdrawn)

With regard to the rejection of claims 22, 44, and 47, Applicant respectfully traverses any rejection, and has presented linking claims as just described. *Jackson et al.* only discuss flipping the devices from a first tray into a second tray and then passing the second tray. In such a system, any identification or markings on the first tray that are associated with a particular set or batch of devices are no longer associated with the devices once they are placed in the second tray. Neither *Jackson et al.* nor the Applicant's discussion of the prior art flips the devices and then puts the devices back into the same tray. In contrast, the present Figures 19c-19g show flipping a plurality of devices and then placing them back into the same tray.

Accordingly, the claims appear to be in condition for allowance, and reconsideration and reversal of the rejections is respectfully requested.

Conclusion

It is respectfully submitted that the claimed invention is patentable in view of the cited art. It is respectfully submitted that claims 3-10, 12-21, 27-30, and 37-51 should therefore be allowed. Reconsideration and withdrawal of the Examiner's rejections of claims 3-10, 12-21, 27-30, and 37-48 is respectfully requested.

Respectfully submitted,

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Filed: April 5, 2007

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CERTIFICATE UNDER 37 CFR 1.8(a)(1)(i)(C) (paragraph C being a new amendment to Section 1.8 published in the **Federal Register**, Vol. 72, No. 14, Tuesday, Jan. 23, 2007, page 2773): The undersigned hereby certifies that this document is being electronically filed via the U.S. Patent Office's EFS filing system on this **5th day of April, 2007, Central Standard Time**, addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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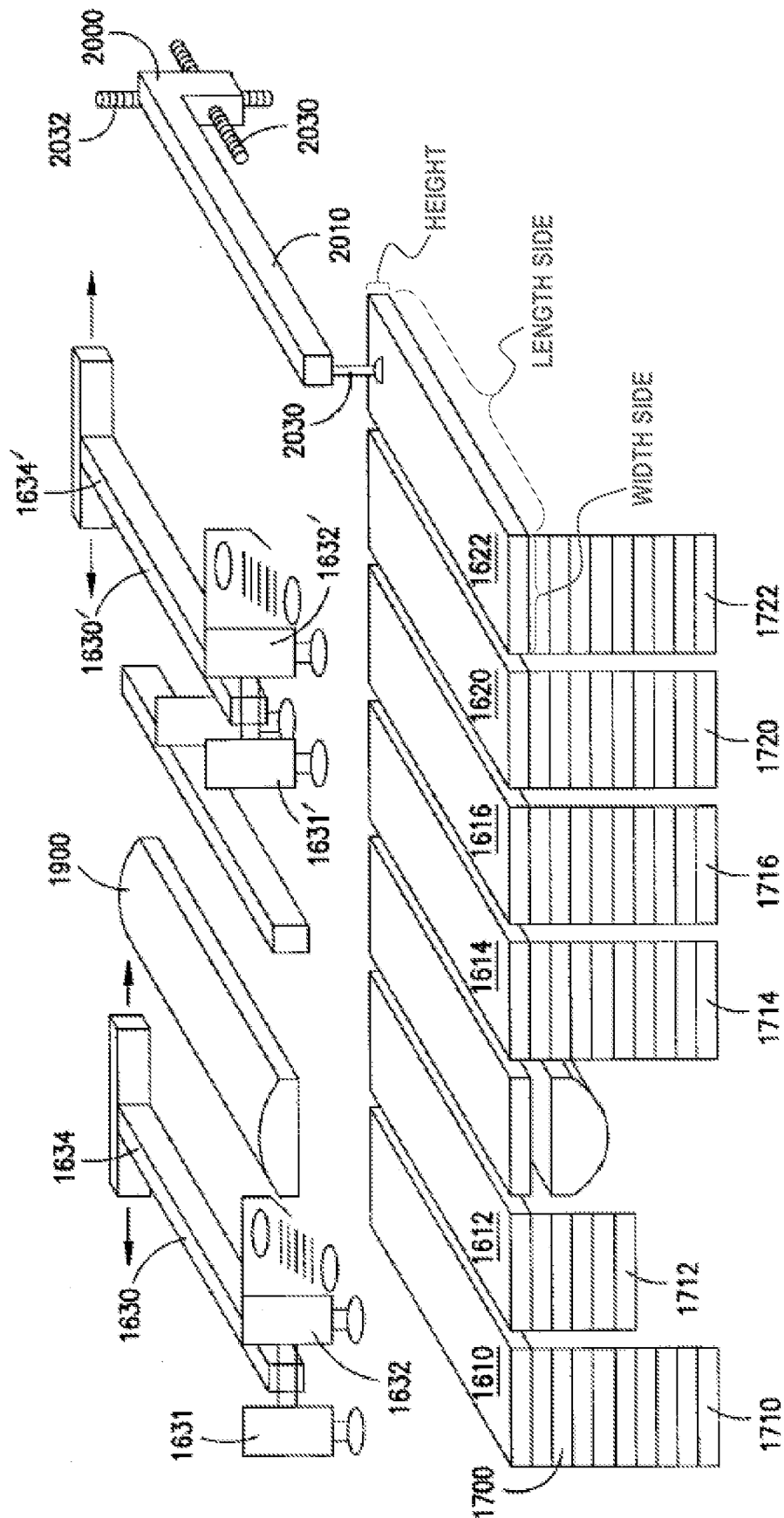


FIG. 16